

Listing of Claims:

1. (currently amended) An article of manufacture including a computer-readable medium comprising;

a program interface object (PIO) for representing a particular television program within a memory of an interactive television system, the PIO comprising a separate data structure for encapsulating:

attribute data for a plurality of attributes carrying information about the television program;

program code for a plurality of user-selectable actions performable by the interactive television system in connection with the television program, the ~~user-selectable actions being represented within the PIO as sets of~~ program code for causing the interactive television system to carrying out the respective actions; and

graphical data for displaying a visual indicator ~~displayable~~ in a graphical user interface to facilitate user interaction with the PIO, ~~wherein the graphical user interface is other than a grid-based electronic program guide with rows and columns corresponding to channels and timeslots~~ wherein the attribute data, program code, and graphical data associated with the particular program are transmittable as a unit from one interactive television system to another in response to the encapsulating PIO being sent between the interactive television systems.

2. (previously presented) The computer-readable medium of claim 1, wherein the visual indicator comprises one of a graphical icon, an animated image, a video clip, and a text description.

3. (currently amended) The computer-readable medium of claim 1, wherein the PIO further encapsulates comprising:

audio data for an audible indicator capable of being played back by the interactive television system.

4. (canceled).

5. (currently amended) The computer-readable medium of claim 1, wherein the program code is ~~substantially~~ machine-independent to be executable in a virtual machine within the interactive television system and any destination device to which the PIO is sent, such that the program code does not need to be installed on the destination device prior to receiving the PIO in order to perform an associated user-selected action.

6. (previously presented) The computer-readable medium of claim 5, wherein the PIO comprises one of a JavaBean object and a Distributed Component Object Model (DCOM) object.

7. (previously presented) The computer-readable medium of claim 1, wherein at least one attribute comprises a title of the television program.

8. (previously presented) The computer-readable medium of claim 1, wherein at least one attribute comprises a starting time of the television program.

9. (previously presented) The computer-readable medium of claim 1, wherein at least one attribute comprises a running time of the television program.

10. (previously presented) The computer-readable medium of claim 1, wherein at least one attribute comprises a description of the television program.

11. (previously presented) The computer-readable medium of claim 1, wherein at least one attribute comprises an indication of a channel on which the television program is broadcast.

12. (previously presented) The computer-readable medium of claim 1, wherein at least one attribute comprises a storage location of the television program.

13. (previously presented) The computer-readable medium of claim 1, wherein at least one attribute comprises an alternative language version of another attribute.

14. (previously presented) The computer-readable medium of claim 1, wherein at least one user-selectable action is configured to display at least one attribute of the PIO using the interactive television system.

15. (previously presented) The computer-readable medium of claim 1, wherein at least one user-selectable action is configured to record the television program within the interactive television system.

16. (previously presented) The computer-readable medium of claim 1, wherein at least one user-selectable action is configured to display the television program using the interactive television system.

17. (currently amended) A method for managing television programs received by an interactive television system, the method comprising:

providing, for each television program, a program interface object (PIO) for representing a respective television program within the interactive television system, the PIO comprising a discrete data structure for encapsulating data for a plurality of attributes carrying information about the television program, program code for a plurality of user-selectable actions performable by the interactive television system in connection with the television program, ~~the user-selectable actions being represented within the PIO as sets of program code for carrying out the respective actions;~~ and graphical data for a visual indicator displayable in a graphical user interface to facilitate user interaction

with the PIO, wherein the graphical user interface is other than a grid-based electronic program guide with ~~rows and~~ columns corresponding to channels ~~and timeslots~~;
displaying ~~a plurality of one or more~~ visual indicators of respective PIOs;
receiving a user selection of a PIO through its visual indicator;
displaying a list of available actions for the selected PIO;
receiving a user selection of one of the available actions; and
executing the program code included with the PIO for the selected action within the interactive television system.

18. (canceled).

19. (previously presented) The method of claim 17, wherein the list is displayed in a context-sensitive menu associated with the visual indicator of the selected PIO.

20. (original) The method of claim 17, wherein displaying one or more visual indicators comprises:

filtering an initial set of PIOs according to user-specified filtering criteria; and
displaying visual indicators of the PIOs satisfying the filtering criteria.

21. (original) The method of claim 17, further comprising:

receiving at least one PIO from a remote system.

22. (original) The method of claim 17, further comprising:
transmitting at least one PIO to a remote system in response to a user command.

23. (original) The method of claim 21, further comprising:
modifying at least one attribute of a PIO in response to a schedule change.

24. (original) The method of claim 17, wherein at least one visual indicator comprises one of a graphical icon, an animated image, a video clip, and a text description.

25. (currently amended) The method of claim 17, wherein at least one PIO further encapsulates audio data for ~~includes~~ an audible indicator, the method further comprising:

playing back the audible indicator using the interactive television system.

26. (canceled).

27. (currently amended) The method of claim 17, wherein the program code is ~~substantially~~ machine-independent to be executable in a virtual machine within the interactive television system and any destination device to which the PIO is sent, such that the program code does not need to be installed on the destination device prior to receiving the PIO in order to perform an associated user-selected action.

28. (original) The method of claim 27, wherein at least one PIO comprises one of a JavaBean object and a Distributed Component Object Model (DCOM) object.

29. (original) The method of claim 17, wherein at least one attribute comprises a title of a television program.

30. (original) The method of claim 17, wherein at least one attribute comprises a starting time of a television program.

31. (original) The method of claim 17, wherein at least one attribute comprises a running time of a television program.

32. (original) The method of claim 17, wherein at least one attribute comprises a description of a television program.

33. (original) The method of claim 17, wherein at least one attribute comprises an indication of a channel on which a television program is broadcast.

34. (original) The method of claim 17, wherein at least one attribute comprises a storage location of a television program.

35. (original) The method of claim 17, wherein at least one attribute comprises an alternative language version of another attribute.

36. (original) The method of claim 17, wherein at least one user-selectable action is configured to display an attribute of the selected PIO using the interactive television system.

37. (original) The method of claim 17, wherein at least one user-selectable action is configured to record a television program corresponding to the selected PIO within the interactive television system.

38. (original) The method of claim 37, further comprising:
recording the television program at a time indicated by an attribute of the selected PIO.

39. (original) The method of claim 17, wherein at least one user-selectable action is configured to display a television program corresponding to the selected PIO using the interactive television system.

40. (original) The method of claim 39, further comprising:
locating a stored recording of the television program using an attribute of the selected PIO;
displaying the stored recording of the television program.

41. (currently amended) A system for managing television programs received by an interactive television system, the system comprising:

a computer-readable medium comprising, for each television program, a program interface object (PIO) for representing a respective television program within the interactive television system, the PIO comprising a discrete data structure container for containing data for a plurality of attributes carrying information about the television program, program code for a plurality of user-selectable actions performable by the interactive television system in connection with the television program, ~~the user-selectable actions being represented within the PIO as program instructions for carrying out the respective actions,~~ and graphical data for a visual indicator displayable in a graphical user interface to facilitate user interaction with the PIO, ~~wherein the graphical user interface is other than a grid-based electronic program guide with rows and columns corresponding to channels and timeslots;~~

a display component configured to display one or more visual indicators of respective PIOs;

a selection component configured to receive a user selection of one of the [[a]] visual indicators corresponding to a selected PIO ~~and a user selection of an action associated with the selected PIO;~~ and

~~an action~~ transmission component configured to ~~execute the program instructions from the PIO associated with the selected action within the interactive television system~~ transmit the attribute data, program code, and graphical data for the particular television program associated with the selected PIO as a unit to another interactive television system.

42. (original) The system of claim 41, wherein the selection component is further configured to display, in response to a user selection of a visual indicator, a list of user-selectable actions associated with the selected PIO.

43. (original) The system of claim 42, wherein the list is displayed in a context-sensitive menu associated with the visual indicator of the selected PIO.

44. (original) The system of claim 41, further comprising a population component configured to filter an initial set of PIOs according to user-specified filtering criteria, wherein the display component is further configured to display the visual indicators of the PIOs satisfying the filtering criteria.

45. (original) The system of claim 41, further comprising a communication component configured to receive at least one PIO from a remote system.

46. (original) The system of claim 45, wherein the at least one PIO is received from the remote system via e-mail.

47. (original) The system of claim 41, further comprising a communication component configured to transmit at least one PIO to a remote system in response to a user command.

48. (original) The system of claim 41, wherein at least one visual indicator comprises one of a graphical icon, an animated image, a video clip, and a text description.

49. (currently amended) The system of claim 41, wherein at least one PIO encapsulates audio data for ~~includes~~ an audible indicator, the system further comprising:

a playback component configured to play back the audible indicator.

50. (canceled).

51. (currently amended) The system of claim 41, wherein the program code is ~~substantially~~ machine-independent to be executable in a virtual machine within the interactive television system and any destination device to which the PIO is sent, such that the program code does not need to be installed on the destination device prior to receiving the PIO in order to perform an associated user-selected action.

52. (original) The system of claim 51, wherein at least one PIO comprises one of a JavaBean object and a Distributed Component Object Model (DCOM) object.

53. (original) The system of claim 41, wherein at least one attribute comprises a title of a television program.

54. (original) The system of claim 41, wherein at least one attribute comprises a starting time of a television program.

55. (original) The system of claim 41, wherein at least one attribute comprises a running time of a television program.

56. (original) The system of claim 41, wherein at least one attribute comprises a description of a television program.

57. (original) The system of claim 41, wherein at least one attribute comprises an indication of a channel on which a television program is broadcast.

58. (original) The system of claim 41, wherein at least one attribute comprises a storage location of a television program.

59. (original) The system of claim 41, wherein at least one attribute comprises an alternative language version of another attribute.

60. (original) The system of claim 41, wherein the display component is further configured to display an attribute of the selected PIO using the interactive television system.

61. (original) The system of claim 41, further comprising:

a recording component configured to record a television program corresponding to the selected PIO using the interactive television system.

62. (original) The system of claim 61, wherein the recording component is further configured to record the television program at a time indicated by an attribute of the selected PIO.

63. (original) The system of claim 41, wherein the display component is further configured to display a television program corresponding to the selected PIO using the interactive television system.

64. (original) The system of claim 63, further comprising:

a playback component configured to locate a stored recording of the television program using an attribute of the selected PIO, and display the stored recording of the television program.

65. (currently amended) A method for managing television programs received by an interactive television system, the method comprising:

providing, for each television program, a program interface object (PIO) for representing a respective television program within the interactive television system, the PIO comprising a distinct object for containing data for a plurality of attributes carrying information about the television program, program code for a plurality of user-selectable actions performable by the interactive television system in connection with the television program, ~~the user-selectable actions being represented within the PIO as groups of program code for carrying out the respective actions;~~ and graphical data for an icon displayable in a graphical user interface to facilitate user interaction with the PIO, wherein the graphical user interface is other than a grid-based electronic program guide with rows ~~and columns~~ corresponding to channels ~~and timeslots~~;

filtering an initial set of PIOs according to user-specified filtering criteria;
displaying the icons corresponding to the PIOs satisfying the filtering criteria;
receiving a user selection of an icon corresponding to a selected PIO;
displaying a list of user-selectable actions associated with the selected PIO;
receiving a user selection of an action associated with the selected PIO from the list; and

executing the program code associated with the PIO for the selected action within the interactive television system.

65. (canceled).

66. (currently amended) A system for managing television programs received by an interactive television system, the system comprising:

means for storing, for each television program, a program interface object (PIO) for representing a respective television program within the interactive television system, the PIO comprising a separate data structure for encapsulating data for a plurality of attributes carrying information about the television program, program code for a plurality of user-selectable actions performable by the interactive television system in connection with the television program, ~~the user selectable actions being represented within the PIO as sets of program code for carrying out the respective actions;~~ and graphical data for a visual indicator displayable in a graphical user interface to facilitate user interaction with the PIO;

means for displaying one or more visual indicators corresponding to PIOs;

means for receiving a user selection of a visual indicator corresponding to a selected PIO and a user selection of an action associated with the selected PIO; and

means for transmitting the attribute data, program code, and graphical data for the particular television program associated with the selected PIO as a unit to another interactive television system.

~~executing the program code in the PIO for the selected action within the interactive television system.~~

67. (currently amended) A system for managing television programs received by an interactive television system, the method comprising:

a computer-readable medium storing, for each television program, a program interface object (PIO) for representing a respective television program within the interactive television system, the PIO comprising a discrete object for encapsulating ~~comprising data for~~ a plurality of attributes carrying information about the television program, program code for a plurality of user-selectable actions performable by the interactive television system in connection with the television program, ~~the user-selectable actions being represented within the PIO as sets of program code for carrying out the respective actions;~~ and graphical data for an icon displayable in a graphical user interface to facilitate user interaction with the PIO, wherein the graphical user interface is other than a grid-based electronic program guide with rows ~~and~~ ~~columns~~ corresponding to channels ~~and timeslots~~;

a filtering component configured to filter an initial set of PIOs according to user-specified filtering criteria;

an icon display component configured to display the icons corresponding to the PIOs satisfying the filtering criteria;

an icon selection component configured to receive a user selection of an icon corresponding to a selected PIO;

an action display component configured to display a list of user-selectable actions associated with the selected PIO;

an action selection component configured to receive a user selection of an action associated with the selected PIO from the list; and

an action execution component configured to execute the program code associated with the PIO for the selected action within the interactive television system.